The Dollars and Cents of a ROUSH Propane Vehicle

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The business case for a ROUSH F-150 Propane vehicle is easy to understand. Personal, business, and municipal users, will all see significant benefits. A ROUSH Propane vehicle makes economic sense for most operators on its own merits, but when coupled with available government tax credits and/or grants, the economics are compelling.

According to the Detroit News, "*In 2003, after the Clinton administration spent $1.5 billion on a hybrid-electric sedan, the Bush administration touted $1.2 billion for hydrogen technology*." With ROUSH Liquid Propane Injection, you can get complete energy independence today, for only $10,000.

An analysis of the decision should include the following items

- Vehicle conversion cost after government credits
- Gasoline and Liquefied Propane Gas (LPG) fuel cost (current and future)
- Amount of LPG versus gasoline consumed
- Tax credits or government grants which affect the vehicle and fuel cost
- Non-economic benefits to the user, by the use of Green Energy
- Non-economic benefits to the user, by the use of primarily US-sourced fuel
- Availability of LPG where needed to refuel the vehicle
- Potential increase in vehicle life
- Potential increase in vehicle resale value

Vehicle Conversion Cost and Government grants/credits

The ROUSH Propane F-150 conversion is priced at $9,990, installed at Ferrario Ford, in Elmira, NY. The Federal Government offers an income tax credit to purchasers of alternative fuel vehicles. The ROUSH Propane F-150 qualifies for a $2,500 tax credit. *Your net cost is $7,490, less state credits that may be apply.*

The ROUSH Propane F-250 and Econoline E-250 are expected to begin shipping in the fall of 2009, priced at $9,990. The Econoline has not yet been priced. The higher gross vehicle weight of those vehicles, qualifies them for a $5,000 Federal Tax Credit. *The F-250 Propane has a net cost of only $4,990.*

Government agencies are not affected by tax credits. When the customer is unable to claim the credit, Federal Law provides that the seller of the upfit may claim the credit. In such case, Ferrario Ford will offer a discount to municipal purchasers. The amount of that discount will vary, depending on the number of vehicles.

State benefits will vary. See www.drivepropane.com for reference to other state grants or tax credits.

Many grants are available to government agencies and municipalities. In some cases, the Municipal grants can extend to the entire vehicle cost, not just the upfit. State Municipal grants are generally additive to the Federal grants or credits. In some cases, the grants can total more than the cost of conversion. See www.drivepropane.com for more details.

After tax credits, the most any user will pay for ROUSH Liquid Propane conversion, is $7,490. Even before considering reduced operational costs and vehicle resale, a vehicle life of at least 10 years equals $749 per year. Are you willing to spend $749 per year, to tell the Middle East and Venezuela to keep their oil?

Propane fuel cost, and tax credits, versus gasoline

Would you like to buy your fuel for $1.18 per gallon? Current retail price for LPG is approximately $3.50 per gallon, plus applicable road tax. How do I get it for $1.18?

Most LPG distributors will install storage and dispensing at the customer's location, for a negligible charge. With on-site dispensing, you can purchase LPG at a wholesale price. On this date, a local survey showed that price at $1.50 per gallon. Distributors should see www.drivepropane.com, for information on government grants up to 50% of the cost of infrastructure, for propane dispensing systems used for motor vehicles.

The user or distributor must remit road tax to local authorities. A link to current road tax rates is available at www.drivepropane.com. There is no propane road tax in New York. The Federal excise tax is $.18 per gallon.

There is a $.50/gal federal subsidy for LPG used in motor vehicles. That's right – Uncle Sam will help pay for your fuel. The money goes to the person or company who puts fuel into a motor vehicle. To claim the credit as a user, you must have your own dispensing equipment. If you purchase fuel directly at stations, the fueler gets the credit. If you purchase fuel off site at the same station regularly, ask for a subsidy sharing arrangement with the seller.

To receive the tax credit, complete IRS Form 637, available at www.drivepropane.com, which makes you eligible for the subsidy. Complete a reporting form on a quarterly basis showing how many gallons were placed in motor vehicles. The reporting form generates the tax credit, and is also used to pay the Federal excise tax.

Summarizing above, propane fuel can be purchased for a net cost of $1.50 + .18 - .50 = $1.18.

Regular gasoline currently sells for about $2.00 per gallon. 20,000 miles per year at 16 mpg, equals $2,500 for gasoline. That same user will spend $1,686 for propane, at 14 mpg. ***Even at today's low gasoline price, propane will save $814 per year in fuel cost.***

During the summer of 2008, when gasoline and diesel reached their peak, LPG was relatively unaffected. With the 50 cent subsidy, the peak price for LPG was only $1.80, at a time when gasoline exceeded $4. The same user would have spent $5,000 per year for gasoline, but only $2,571 for propane, ***saving $2,429 per year in fuel cost.***

An F-250 diesel typically gets about 12mpg. The ROUSH Propane F-250 would be similar. 20,000 miles per year, with diesel at $2.20/gal, the annual fuel cost is $3,666 for diesel, versus $1,966 for propane, saving **$1,700 today**. At 2008's peak of $5.000 for diesel, **the ROUSH F-250 Propane user saved $5,333 each year**.

Note that states, municipalities, and school districts ARE eligible for the 50 cent subsidy, and are not subject to the 18 cent excise tax. The NY State Contract price for municipal LPG purchase is $1.16 per gallon, less the 50 cent Federal subsidy. ***Municipalities can purchase propane for a net cost of 66 cents per gallon.***

As the world economy rebounds, $4 per gallon gasoline will happen again. Haven't we learned this lesson before?

Amount of Fuel Consumed

Compared to gasoline, LPG contains 20% less BTU of energy. The efficient ROUSH design yields 13% less mpg than a comparable gasoline vehicle. Under light loads, this difference may be less. Under heavy loads, this difference will be greater. A 13% difference in consumption should be used in a cost analysis. Even at today's low gasoline price, propane has a net cost 40% lower than gasoline, far offsetting the difference in consumption.

Non-Economic benefits from the use of Green Energy

LPG is refined mostly from natural gas, so why is it a Green Energy source? Exhaust emissions are dramatically lower.

- 18 percent less greenhouse gas emissions*
- 20 percent less nitrous oxide
- 60 percent less carbon monoxide
- fewer particulate emissions
- eliminates Benzene and Tuolene, which are known carcinogens

Propane itself is not a direct greenhouse gas when released into the air, according to measurements reported by the Intergovernmental Panel on Climate Change. Unlike fuels such as natural gas, propane vapor is removed from the atmosphere faster than it takes for it to become well-mixed and impact the global climate.

*** Comparisons of nitrous oxide and carbon monoxide emissions are taken from studies conducted by the World LP Gas Association and the California Energy Commission in January 2003. Data on particulate emissions comes from studies by the Southwest Research Institute.*

Non-economic benefits of primarily US-sourced fuel

During the 1970s, the U.S. imported approximately 35 percent of its oil supply; by 2005 that figure increased to approximately 65 percent imported from foreign nations (Source: Energy Information Administration).

Propane currently supplies about four percent of U.S. energy needs, but the potential is there to supply much more. 90 percent of U.S. propane supplies are produced at existing domestic facilities. Another seven percent comes from Canada, making propane a very secure energy resource. With the world's largest propane storage capacity, the U.S. is well positioned to compete for growing supplies of propane being produced with new sources of natural gas coming online, such as the Marcellus Shale in the Northeast.

Simply increasing the use of this affordable fuel in select vehicle fleets by a mere 10 percent could displace nearly one billion gallons of gasoline by the year 2017, reducing our country's dependence on foreign oil in a big way.

Availability of Propane to refuel where needed

The most economical way to fuel your ROUSH Propane vehicle is with your own equipment. A Roush Propane F-150 has a range of 400 to 500 miles, so you will rarely buy fuel away from home. Even with that range, there will be times you want to refuel elsewhere.

Finding a fueling station to fill up your propane-powered vehicle isn't as hard as you might think. With more than 2,500 service stations already in operation around the country, you can be sure to find a place to fill up with little effort. Every U-Haul outlet, sells LPG. The ROUSH Propane F-150 does not require specialized dispensing equipment. If you can fill a gas grille propane cylinder, you can fill the ROUSH Propane F-150. See www.drivepropane.com, for links to propane sources in your area.

Increased in Vehicle Life

The ROUSH Propane F-150 is the first EPA and CARB certified vehicle with Liquid Propane Injection.

Other propane conversions use propane in vapor form. Vapor systems are plagued with cold starting problems, driveability issues, and reduced power. The ROUSH system injects liquid fuel directly into the engine, becoming a gas only at the instant before combustion. This is the same well proven system used for gasoline engines of all manufacturers today. Only ROUSH has the expertise to apply this to Propane in light trucks.

The ROUSH LPI system uses the original Ford computers with ROUSH-developed software. The fuel pump and injectors are the only wearable components changed from the original Ford specification. Other ROUSH components such as fuel tank, fuel lines, injector rails, etc, are static pieces that typically last the life of a vehicle.

The ROUSH LPI components do not require any more maintenance than the same components on a gasoline Ford vehicle. Contrast that with diesel engines, which any user will advise are much more expensive to maintain, while consuming diesel fuel that is even more expensive than gasoline.

Repairs can be made at any Ford Dealer. To the repair technician, this is like any other Ford truck with a 5.4L engine. The technician uses the same diagnostic tools and procedures as a gasoline 5.4L engine. Technical assistance is available from ROUSH by phone, at no charge.

Propane is a cleaner burning fuel than gasoline. Far less combustion impurities end up in the engine’s cylinders. That means virtual elimination of carbon buildup in cylinders and valves, and reduced oil contamination. The end result is an engine that lasts longer.

Increased in Resale Value

When gasoline was $4 per gallon, no one wanted a gas guzzling vehicle. Economic benefits of owning a ROUSH Propane vehicle are even greater, as the cost of gasoline goes up. When it is time to trade in your ROUSH F-150 a few years from now, do you expect gasoline will cost more than today? If so, your ROUSH Propane vehicle is likely to return more resale value than its gasoline counterpart.

The Tale of John, Steve, and George

Let's consider the tale of two F-150 owners. Both bought a new 2008 F150 at Ferrario Ford in the spring of 2008. Both John and Steve drive about 1,500 miles per month. They both enjoy the same torque and horsepower from their Ford 5.4L engines.

John kept with the stock gasoline fuel system. He averages about 16mpg with his new truck, in combination city/highway driving. When gasoline peaked at $4.30 per gallon, his fuel cost was $405 per month. That's $100 per week. John is not happy when he goes to the gas pump. He wants to trade for something more fuel efficient, but gas prices have depreciated the resale of his truck so much, he can't get out of it.

Steve bought the ROUSH LPI System. When fuel price peaked last summer, his net cost was only $1.80 after he got 50 cents per gallon back from Uncle Sam. His monthly fuel cost was $193. In 35 months, Steve would save enough on fuel to pay for the additional cost of his ROUSH Propane system. After then, he's still saving every month, and his truck will be worth more when he trades it on another ROUSH Propane F-150.

Steve and John have another friend, George. George sold his truck, and bought one of those little 4-cylinder cars. He doesn't understand why Steve and John don't get rid of their gas guzzlers. George's little car gets 30mpg average city/highway (it's a *very* little car!). When fuel was $4.30 per gallon, George spent $215 per month. *That means it cost more to operate George's little car on imported gasoline, than it does Steve's ROUSH Propane F-150 with domestic fuel.*

George still has his fishing boat and snowmobile trailer, but he has to borrow Steve's ROUSH Propane F-150 to move his toys. Steve is a nice guy, and doesn't mind. George's wife is also happy, because he spends more weekends at home.

Summary

Which fuel is likely to cost more in the future - the one that is mostly sourced overseas in countries often not friendly to us, or the one that is sourced 97% in the US and Canada?

Do you place a value on telling the Middle East and Venezuela to keep their oil? Do you place a value on cleaner air?

The ROUSH Liquid Propane Injection system is available today at Ferrario Ford, Elmira, NY.
Phone 607-734-1681 or visit www.drivepropane.com for more details.